

### Abstract

A phase-locked loop system and method are provided. The system may include an error detector configured to receive a reference signal, and a voltage-controlled oscillator subsystem coupled to the error detector. The voltage-controlled oscillator subsystem is typically configured to produce a primary output signal that tends toward a predefined frequency relationship with the reference signal, and to produce a feedback signal that is routed in a feedback loop back to the error detector. The voltage-controlled oscillator subsystem typically includes a multiple output voltage-controlled oscillator having a plurality of VCO outputs. The voltage-controlled oscillator subsystem is typically configured to form the feedback signal from a plurality of the VCO outputs.